

**Before the
Federal Communications Commission
Washington, D.C. 20554**

In re Applications of)	
)	
U.S. Electrodynamics, Inc.)	File Nos. SES-MOD-19990820-1423
)	SES-MOD-19990820-1424
For modification of licenses for)	SES-MOD-19990820-1425
five transmit/receive fixed satellite)	SES-MOD-19990820-1426
earth stations at Brewster, Washington)	SES-MOD-19990820-1427
for operation with the ICO Medium)	
Earth Orbit satellite system)	

ORDER AND AUTHORIZATION

Adopted: March 10, 2000

Released: March 10, 2000

By the Chief, International Bureau and Chief, Office of Engineering and Technology:

I. Introduction

1. With this Order, we grant conditional authority to U.S. Electrodynamics, Inc. ("USEI") to use an additional three megahertz of spectrum to provide tracking, telemetry, and command (TT&C) communications for the ICO Global Communications Medium Orbit Satellite system. This will allow USEI to provide support for in-orbit maintenance of ICO satellites pending completion of international coordination and resolution of pertinent issues in domestic service-authorization proceedings.

II. Background

2. On June 24, 1999, we granted USEI conditional authority to operate five identical transmit/receive earth stations at a site in the vicinity of Brewster, Washington to provide TT&C for ICO's planned satellite system, using eight megahertz of spectrum in the C-Band.¹ The ICO

¹ DA 99-1249, 1999 W.L. 417393 ("Initial TT&C Order"). "C-Band," as used in this order, refers to the spectrum between four gigahertz and approximately seven gigahertz.

system is designed to provide communications on a global basis via non-geostationary satellites to users equipped with mobile terminals using the 2 GHz Mobile Satellite Service ("MSS") frequency bands for service links between users' terminals and satellites. ICO, a British corporation, has secured approval from the government of the United Kingdom for provision of MSS in that country and has filed a Letter of Intent requesting authority to provide MSS to end users in the United States.² ICO's Letter of Intent is under consideration in the Commission's pending 2 GHz processing round.³ USEI's Brewster complex is the only site in the United States licensed for provision of TT&C for the ICO constellation, which will receive additional TT&C support from facilities situated elsewhere around the world.

3. As ICO's 2 GHz Letter of Intent is outstanding, the ICO system is not currently authorized to provide service to end-users in the United States. Nevertheless, in the *Initial TT&C Order*, we concluded that permitting a U.S. earth station to provide in-orbit maintenance for ICO's global satellite system would serve the interest of the U.S. public by fostering international cooperation in telecommunications development.⁴ While acknowledging that USEI's proposal to use C-Band spectrum for TT&C might be incompatible with the spectrum requirements of other licensed or proposed MSS systems, we addressed such concerns or possibilities by imposing conditions on the license grant.⁵ Thus, we provided that the TT&C authorization would be subject to any restriction necessary for conformance with rules or policies subsequently adopted in the *2 GHz Proceeding*. Further, because the authorization entailed waiver of the Table of Frequency Allocations and the downlink frequencies were situated in spectrum bands that had been assigned or claimed for feeder links for previously-licensed Mobile Satellite Service systems, we required USEI and ICO to conduct TT&C operations without harmful interference to other authorized operations.⁶ We also conditioned the TT&C license on submission of a demonstration that USEI's Earth-to-space transmissions would not cause unacceptable interference to authorized TT&C or feeder link operation of the "Globalstar" Mobile Satellite Service system licensed to L/Q Licensee, Inc.⁷ Finally, at the request of the National Telecommunications and Information Administration, we included a

² File No. 188-SAT-LOI-97 (Sept. 26, 1997).

³ *See Establishment of Policies and Service Rules for the Mobile Satellite Service in the 2 GHz Band* (Notice of Proposed Rulemaking), 14 FCC Rcd 4843 (1999) ("2 GHz Proceeding").

⁴ *Initial TT&C Order*, *supra*, at ¶10.

⁵ *Id.* at ¶¶ 12 and 13.

⁶ *Id.* at ¶¶ 14 and 17.

⁷ *See L/Q Licensee, Inc.*, 11 FCC Rcd 16,410 (1996).

condition requiring USEI to demonstrate compliance with restrictions for protection of Microwave Landing Systems operating in the frequencies we were assigning to USEI for TT&C uplinks.

4. On August 20, 1999, USEI filed an application for license modification, requesting an additional three megahertz of spectrum for TT&C operation. The *Initial TT&C Order* had assigned 5179.5-5181.5 MHz and 5242.5-5244.5 MHz for uplink transmission and 7011-7013 MHz and 7071.9-7073.9 MHz for downlinks. In the modification application, USEI requests supplemental uplink assignments at 5185.1 MHz, 5185.8-5187.1 MHz, 5236.9-5238.2 MHz, and 5241.2 MHz and supplemental downlink assignments at 7015.1 MHz, 7017.3-7017.5 MHz, 7068.3-7068.5 MHz, and 7071.2 MHz. USEI states that the additional spectrum is needed for command and telemetry transmission to support launch, testing, maintenance, and diagnostic analysis of the ICO satellites.⁸ USEI represents that this spectrum will not be used for management or carriage of commercial traffic. USEI indicates that it would not object to imposition of conditions similar to those specified in the *Initial TT&C Order*. Its application is unopposed.

5. The first ICO satellite launch, originally scheduled for a July/August 1999 time-window, was delayed due to government-ordered closure of the Russian launch site. Soon after announcing the postponement, ICO filed a petition for reorganization under Chapter 11 of the Federal Bankruptcy Code. In a pleading filed on January 21, 2000, USEI reports that the bankruptcy court has granted final approval of a refinancing plan for ICO, that ICO has advised USEI that the new funding would suffice for “build-out” and launch of its satellites, and that launch of the first ICO satellite is re-scheduled for March 12, 2000.

III. Discussion

6. We continue to believe that it serves the public interest to grant conditional authorization for TT&C communication between ICO satellites and USEI’s facilities at Brewster pending disposition of ICO’s Letter of Intent in the *2 GHz Proceeding*. USEI has not increased its TT&C requirements in the modification application. Rather, it states that it has always intended to use the spectrum in question for TT&C, although that was not clear in its original application. The additional three megahertz of TT&C spectrum that USEI requests is needed to support the ICO constellation. The scheduled launch of the first ICO satellite is imminent. Granting the additional TT&C authority now, in advance of disposition of the *2 GHz Proceeding*, will facilitate institution of satellite telecommunication service elsewhere around the

⁸ USEI also requested these additional assignments in its original license application but did not clearly indicate that they would be used for TT&C. Consequently, we denied that request in the *Initial TT&C Order*, which granted authority only for TT&C operation.

world and foster international cooperation in telecommunication development, to the ultimate benefit of the U.S. public. On March 1, 2000 USEI submitted a showing, which was copied to Globalstar, that the proposed TT&C operation will not cause unacceptable interference to the Globalstar system.⁹ USEI represented that its use of telecommand carrier frequencies at 5186.4 MHz, 5186.6 MHz, 5186.8 MHz, 5237.2 MHz, 5237.4 MHz, and 5237.6 MHz will be inhibited during in-line events with respect to Globalstar satellites. USEI also represented that there is no overlap between ICO's payload telemetry carrier at 7068.4 MHz and its AFC carriers above 7055 MHz and Globalstar's authorized 7 GHz frequencies. Globalstar has not filed any objection to that showing. USEI also indicates that it has secured approval from the Federal Aviation Administration concerning arrangements for protection of Microwave Landing Service operations, and officials of that agency have independently confirmed the representation. Hence, we conclude that granting USEI's request for additional TT&C assignments on a non-interference basis, subject to the outcome of the *2 GHz Proceeding* and the other conditions specified below, will serve the public interest.

7. The TT&C frequencies specified in the modification application, like those we authorized in the *Initial TT&C Order*, are not currently allocated for commercial satellite service in the United States. The International Telecommunication Union has allocated these frequencies for feeder link transmission between earth stations and non-geostationary MSS satellites, however, and the Commission has initiated a rulemaking to amend the domestic Table of Frequency Allocations to conform to the international allocation in this respect.¹⁰ The International Bureau has since granted waivers, moreover, to allow several licensees to use portions of these internationally-allocated bands for MSS feeder links and TT&C.¹¹ Consistently with our analogous ruling in the *Initial TT&C Order*, we conclude that a waiver of Section 2.102(a) of the Commission's Rules to permit the proposed operation on a no-harmful-interference basis pending completion of the domestic allocation proceeding is warranted.¹²

IV. Ordering Clauses

⁹ Letter from Counsel for USEI to Magalie Roman Salas, Secretary, FCC dated March 1, 2000, with attachments.

¹⁰ *Amendment of Parts 2, 25, and 97 of the Commission's Rules with Regard to the Mobile-Satellite Above 1 GHz* (Notice of Proposed Rulemaking), 13 FCC Rcd 17107 (1998).

¹¹ See *L/Q Licensee, Inc.*, 11 FCC Rcd 16410 (Intl. Bureau 1996); *Mobile Communications Holdings, Inc.*, 12 FCC Rcd 9663 (Intl. Bureau 1997); *Constellation Communications, Inc.*, 12 FCC Rcd 9651 (Intl. Bureau 1997); and Radio Station Authorization for AirTouch Satellite Services US, Inc., SES-LIC-19970310-00343, granted Feb. 27, 1998.

¹² See *WAIT Radio v. FCC*, 418 F.2d 1153 (D.C. Cir. 1969), cert. denied 409 U.S. 1027.

8. Accordingly, pursuant to authority delegated by Sections 0.241 and 0.261 of the Commission's Rules, 47 C.F.R. §0.241 and §0.261, IT IS ORDERED that Section 2.102(a) of the Commission's Rules, 47 C.F.R. §2.102(a), IS WAIVED and Application File Nos. SES-MOD-19990820-1423/4/5/6/7 authority for tracking, telemetry, and control operation in the 5185.1 MHz, 5185.8-5187.1 MHz, 5236.9-5238.2 MHz, and 5241.2 MHz bands (Earth-to-space) and the 7015.1 MHz, 7017.3-7017.5 MHz, 7068.3-7068.5 MHz, and 7071.2 MHz bands (space-to-Earth) ARE GRANTED, in accordance with the terms of the applications and subject to the following conditions.

- (1) Harmful interference shall not be caused to authorized radiocommunication services and interference protection from authorized stations shall not be claimed.
- (2) Operations shall terminate immediately upon notification of such interference.
- (3) The authority granted here is subject to the outcome of the Commission's rulemaking proceeding in IB Docket No. 99-81 concerning applications for authority to provide 2 GHz MSS service and OET Docket No. 98-142, concerning domestic allocations in the 5/7 GHz frequency bands.
- (4) Operation pursuant to this license shall be consistent with the coordination statement that USEI submitted with a letter to the Commission's Secretary dated March 1, 2000. USEI shall ensure that not more than one of its earth station antennas is oriented, while transmitting, in the direction of one of the Microwave Landing System sites identified in Exhibit B.

11. This order is effective upon release.

FEDERAL COMMUNICATIONS COMMISSION

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